



City of Seattle

Gregory J. Nickels, Mayor

Seattle Transportation
Grace Crunican, Director

MEMORANDUM

DATE: February 28, 2008
TO: Charles Bookman
FROM: Gerard Green
SUBJECT: PORR Interpretation -
Full Lane Asphalt Restoration on Sidewalk and Frontage Improvements

Background

The current version of the SDOT Street and Sidewalk Pavement Opening and Restoration Director's Rule (PORR) requires full lane width asphalt pavement restoration on openings one hundred (100) linear feet or more in length. Consistent with the City's Standard Specifications, the PORR also sets minimum patch dimensions and requires paving be expanded so that joints are not located in vehicle wheel paths, a critical loading area. The relevant PORR sections are:

7.3.1 Minimum size of restoration: On flexible base pavements, the required minimum size of an asphalt patch shall be three (3) feet in both the longitudinal and transverse directions. If the patch is at the edge of the pavement, the patch shall be expanded to a minimum of three (3) feet in width. *On rigid base pavements, the requirements of Section 6.0 RESTORING PORTLAND CEMENT CONCRETE (PCC) STREET SURFACES shall determine patch size.*

7.3.3 Cut Expansion: Cuts shall be expanded to curbs, pavement edges, cracks and include existing patches within two (2) feet of the opening. Cuts shall be expanded to ensure new longitudinal joints are not located in wheel path.

7.3.4 Openings one hundred (100) linear feet or longer: The minimum restoration requirement for openings one hundred linear feet or greater is full-lane width restoration for all lanes affected.

Segregation, poor compaction and other defects are commonly observed on narrow, hand placed asphalt patches. Two examples are shown below.



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Such defects leave a restoration that often deteriorates faster than the pavement surrounding it. This PORR aims to improve the quality of asphalt patches by specifying dimensions that allow equipment to more uniformly place and compact asphalt.

Application of Rule to Frontage Improvements

Site development often requires frontage improvements, including new sidewalk construction. Land use code does not require curbs be reconstructed with the sidewalk, but it is desirable to do so in order to establish a smooth profile. Rebuilding a curb requires a pavement cut, which sometimes triggers a full lane width pavement restoration.

The full lane paving requirements add cost to a project. The Street Use and Pavement Management groups in SDOT estimate the full lane with requirements are triggered on about 15% of the permits that involve curb & gutter restorations. The following are examples of some typical costs, assuming 100ft of frontage:

- Sidewalk restoration (6) feet wide estimated at \$25 a Sq, Ft would be \$15,000.
- Asphalt restoration (3) feet wide estimated at \$35 a Sq, Yd would be \$ 1,167.
- Asphalt restoration (8) feet wide, a typical parking lane width, as outlined in the current Director's Rule would be \$ 3,111.

These estimates do not include associated costs such as traffic control and drainage improvements. The difference in cost between a three foot patch and an eight foot full parking lane restoration is about \$1,944 per hundred feet of frontage.

Recommendations

On sidewalk or frontage improvement projects where a new curb is being constructed, SDOT Pavement Engineering and Management believes the width requirements of PORR Sections 7.3.1, 7.3.3 and 7.3.4 can be waived, provided the following conditions are met:

1. A new sidewalk is being constructed.
2. The patch is made on a street classified as non-arterial or it is entirely within a lane where the current and future use is parking, subject to the determination of the SDOT Traffic Operations Section.

The new curb should conform to the requirements of Standard Plan 410. When tree pits or planting areas are not being proposed, designers may also consider a monolithic sidewalk and curb as shown in Standard Plan 421.

The changes above will be incorporated into the 2008 revision of the PORR.